

# PATENT ABSTRACTS OF JAPAN

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(54) SHEET-LIKE HUMECTANT PACK MATERIAL FOR LIP AND ITS PRODUCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the subject pack material capable of improving chapping, subfusc and smoothness of lip and excellent in improving effect for the spread of cosmetics such as a rouge by using a polymer gel containing a wetting agent and water in a polyacrylamide-based polymer.

SOLUTION: This pack material utilizes a polymer gel containing preferably 0.01-80 wt.% humectant (e.g. glycerol, diglycerol, polyglycerol, polyethyleneglycol) and 10-95 wt.% water in a polyacrylamide-based polymer (preferably a cross-linked polymer obtained by copolymerization of acrylamide with a copolymerizably crosslinkable monomer). The preparation method of the humectant pack material is such a process that a monomer-compounded liquor containing the above-mentioned components and a polymerization initiator are filled in a recessed part formed on a sheet member and polymerized in the recessed part to obtain the polyacrylamide-based polymer.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention improves the dry area of a lip, dullness, and smoothness, and relates to the charge for sheet-like lips excellent in the effectiveness which improves the paste of cosmetics, such as a lip stick, of a moisturization pack. It is using the polymer gel containing a wetting agent and water into a polyacrylamide system macromolecule in more detail, and is related with the charge for sheet-like lips of a moisturization pack characterized by having the function in which the condition of a lip is improvable simple.

[0002]

[Description of the Prior Art] Kamiichi of the lip stick which blended moisturizers, such as polyhydric alcohol and hyaluronic acid, and the lip cream is carried out in order to improve the dry area of a lip conventionally. For example, lip cosmetics aiming at improving the dry area of the lip which consists of a coat formation agent, a wetting agent, oils, and water are proposed by JP,5-70326,A. Moreover, the lips protective agent which consists of a coat formation agent, a wetting agent, fats and oils, and a low is proposed by JP,61-176512,A.

[0003]

[Problem(s) to be Solved by the Invention] however, after the air of winter has dried from autumn In the cosmetics of the moisturization lip stick type which is intense in many cases as for the dry area accompanying desiccation of a lip, and is represented by said lip cosmetics There is a problem that the effectiveness which solves this problem is weak. Moreover, said lips protective agent The problem which applied upwards and cannot use a lip stick since it has a gel gestalt from a solution, although it accepts, and the problem which applies a physical burden to a lip when dropping, and hurts its lip conversely since it is necessary to drop the applied coat of a lips protective agent were effective.

[0004] Since the effectiveness which is excellent in the simplicity of the handling at the time of pasting or the time of removing, and covers a lip front face is also high, it is very effective as these cures to stick the high charge of a pack of the moisturizincy effect fabricated in the shape of a sheet on a lip. However, the point that the part to stick is more delicate than the skin and is the front face of a lip three-dimensional [ a configuration ] and complicated induces new difficulty. That is, when the adhesive big ability for sticking a sheet firmly is required and it removes, in order to make it not give a damage to a lip front face, adhesive ability must be adjusted with careful cautions and it must consider as the configuration which can set up adhesive ability easily.

[0005] Moreover, although the case where a sheet part is made to contain perfume besides various kinds of active principles, such as a wetting agent, antiseptics, etc. can be considered, in order to make these the configuration which does not check the effectiveness and which is \*\* [ a configuration ] and stabilized, stores into a sheet and can be set, these components and the thing of chemical composition which cannot react easily must be used for the member which stores these.

[0006]

[Means for Solving the Problem] this invention people solved this problem by sticking at a lip the

charge of a pack which fabricated a wetting agent and the gel containing water in the shape of a sheet into a polyacrylamide system macromolecule, as a result of inquiring wholeheartedly in view of these problems. That is, also when have the function in which the condition of the chapped lips is improvable simple, and it excelled in adhesiveness, it is easily dropped hard while in use at the time of the strength polymerization since it can adjust, and removing, it found out that the charge for lips of a pack which can be adjusted was appropriately obtained in adhesion so that a damage may not be given to a lip front face. Moreover, it found out that an active principle, an addition component, etc. were made to the structure stored without checking that effectiveness by beginning a lot of moisture in a polyacrylamide macromolecule chain by considering as the charge of a sheet-like pack of this configuration.

[0007] Furthermore, this invention people filled up with the monomer combination liquid and the polymerization initiator containing acrylamide, a wetting agent, and water the crevice formed in the sheet member, and found out the manufacture approach of the charge for sheet-like lips of a moisturization pack characterized by performing a polymerization in this crevice and obtaining a polyacrylamide system macromolecule.

[0008]

[Embodiment of the Invention] The polyacrylamide system macromolecule said by this invention is a macromolecule obtained by carrying out the polymerization (\*\*) of a water-soluble polymerization nature monomer (it being called acrylamides below) with acrylic-acid (meta) amide structure, one sort preferably chosen from acrylamide and methacrylamide, or the two sorts or more. Moreover, the bridge formation mold macromolecule preferably obtained by copolymerization with those acrylamides and cross-linking monomers of a copolymerization mold is mentioned. Furthermore, the bridge formation mold macromolecule which constructed the bridge by the epoxy cross linking agent in the macromolecule obtained by carrying out the polymerization of the acrylamides is mentioned.

[0009] As an example of a cross-linking monomer, for example N and N'-methylenbis acrylamide, -methylenbis methacrylamide, and N,N', N'-ethylene screw acrylamide, [ N, and ] N and N'-ethylene screw methacrylamide, 1, and 2-JIAKURIRU amide ethylene glycol etc. is mentioned. As an epoxy cross linking agent, moreover, ethylene glycol diglycidyl ether, Polyethylene glycol diglycidyl ether, triglycidyl 2 hydroxyethyl isocyanurate, trimethylolpropane polyglycidyl ether, glycerol poly glycidyl ether, sorbitol polyglycidyl ether, etc. are mentioned.

[0010] As a wetting agent used by this invention, saccharides, such as polyhydric alcohol, such as a glycerol, diglycerol, polyglycerin, ethylene glycol, a diethylene glycol, a polyethylene glycol, propylene glycol, dipropylene glycol, a polypropylene glycol, 1, 3-butylene glycol, and an isoprene glycol, a sorbitol, and a MARUBI toll, hyaluronic acid, polysaccharide, such as the salt, a deoxyribonucleic acid, etc. are mentioned, for example. Among these, as a desirable thing, a glycerol, diglycerol, polyglycerin, a polyethylene glycol, 1, 3-butylene glycol, a sorbitol, a MARUBI toll, hyaluronic acid, and its salt are mentioned especially.

[0011] As a presentation ratio of each component which constitutes the polymer gel of the charge for sheet-like lips of this invention of a moisturization pack, acrylamides are desirable still more desirable to the total amount of polymer gel, and 5 - 40 % of the weight is 10 - 25 % of the weight. although gel strength will become strong if acrylamides may become difficult [ it / for the waist reinforcement of a gel object to maintain at a stable condition the wetting agent confined into the structure of past / weakness / and a gel object, water, etc. at less than 5 % of the weight ] and it exceeds 40 % of the weight -- gel -- the amount of the wetting agent which macromolecule structure in the living body becomes dense too much, and can be held, water, etc. may decrease too much Moreover, as loadings of a cross-linking monomer, 0.3 or less % of the weight is desirable to the total amount of polymer gel. If it exceeds 0.3 % of the weight, adhesive ability will fall, and also the brittleness of a gel object increases and it becomes easy to produce cutting and destruction by hauling or compression.

[0012] Although what is necessary is just to decide the loadings of an epoxy cross linking agent suitably to be the adhesive ability and adaptability for which it asks according to the molecular weight and percentage of a polyacrylamide system macromolecule, it is desirable that it is 3 or less % of the weight in polymer gel. If it exceeds 3 % of the weight, adhesive ability will fall, the brittleness of a gel object

increases, and it becomes easy to produce cutting and destruction by hauling or compression.

[0013] As loadings of a wetting agent, 0.01 - 80 % of the weight is desirable to the total amount of polymer gel. At less than 0.01 % of the weight, if it becomes difficult to fully hold required moisture and it exceeds 80 % of the weight, since a wetting agent dissociates from a sheet and causes stickiness, it is not desirable.

[0014] The loadings of water have 10 - 95 desirable % of the weight to the total amount of polymer gel. If grace for a lip front face with the loadings of water sufficient at less than 10 % of the weight cannot be given and it exceeds 95 % of the weight, it may become difficult for a gel object to hold the shape of a sheet.

[0015] The need is accepted at the charge for sheet-like lips of this invention of a moisturization pack. A tackifier, Fine particles usually usable to cosmetics besides a thickener (a pigment, coloring matter, resin, etc.), Oils, a fluorine compound, resin, a surfactant, an ultraviolet ray absorbent, antiseptics, perfume, Components, such as a moisturizer, bioactive components, such as ceramides, a circulation accelerator, a lean figure agent, a vitamin compound, an anti-inflammatory agent, menthol, propolis, and organic acids, an enzyme, salts, a solvent, a chelating agent, a neutralizer, and pH regulator, can be blended with coincidence.

[0016] The approach of carrying out a polymerization by using heat, light, etc. using a well-known radical polymerization initiator for example, conventionally as the manufacture approach of the charge for sheet-like lips of a moisturization pack which blended these components is mentioned.

[0017] When carrying out the thermal polymerization of the monomer solution which blended the above-mentioned raw material, the polymerization of the redox system polymerization initiator which consists of reducing agents, such as azo system polymerization initiators, such as an azobis cyano valeric acid and azobis amino propane 2 hydrochloride, a ferrous sulfate, and \*\* 2 thionic acid, pyrosulfite, and peroxides, such as a hydrogen peroxide and a peroxydisulfuric-acid salt, can be added and carried out. Moreover, when it photopolymerizes, the polymerization of the optical cationic initiators, such as optical radical polymerization initiators, such as an acetophenone system, a benzoin ether system, the Lynn system, a benzophenone system, a thioxan ton system, and an azo system, diazonium salt, diaryl iodonium salt, and a triarylsulfonium salt, etc. can be added and carried out combining independent or two sorts or more if needed.

[0018] After stirring the monomer combination liquid and the polymerization initiator containing acrylamides, a wetting agent, and water to homogeneity, it is desirable to fill up the crevice formed in the sheet member, to perform a polymerization in this crevice, and to obtain a polyacrylamide system macromolecule. The gel sheet fabricated beforehand can be produced so much to the inside of a short time by this, and generating of the gel discarded since it becomes unnecessary to pierce and fabricate gel is suppressed, and in order that it may extract with gel and a cutting edge may not contact, it becomes advantageous also in respect of health. Combination with the approach of carrying out a polymerization by the exposure of light especially using a photopolymerization initiator is desirable at the point which polymerization initiation ends very much for a short time, and is easy to carry out control of a polymerization reaction.

[0019] The acquired gel object may be stuck on a lip as it is, and may be compounded with a nonwoven fabric, a film, etc. if needed. Although it is rich in flexibility, since it excels in the fit nature at the time of the way sticking as the nonwoven fabric to stick or a film, it is desirable.

[0020] As a configuration of the charge for sheet-like lips of this invention of a moisturization pack, an ellipse form, circular, a lip form, a heart form, a hemicycle, a half-ellipse form, a rectangle, etc. are mentioned, and if it is a configuration fit for a lip, there will be especially no limit. Moreover, heights and a crevice may be established in a core or a periphery for alignment or the purpose of a usability improvement. Furthermore, a core, the upper and lower sides, and designation [ before and after ] may be performed by approaches, such as printing. To an up-and-down lip, a configuration may be changed, respectively or thickness, a presentation, and adhesive strength may be changed further again. It is desirable for a twist to also strengthen adhesive strength to a metastoma, or to manufacture thinly to the upper lip, generally. And even if the whole surface of thickness is uniform, and it has changed thickness

partially, it is not cared about. As the thickness, about 0.1-3mm is desirable.

[0021] When it has the structure where a wetting agent and water were held, in the polyacrylamide system macromolecule as a configuration of the charge for sheet-like lips of this invention of a moisturization pack and a lip is made to contact, it is desirable to have the structure where the wetting agent permeates the membrane of a lip.

[0022] The charge for sheet-like lips of this invention of a moisturization pack can also apply the polymer gel sheet simple substance with which a wetting agent and water were held into a polyacrylamide system macromolecule, and also the thing by which the laminating of the gel charge of a pack was carried out to the front face of supporters, such as a nonwoven fabric which consists of a natural fiber, a synthetic fiber, and a regenerated fiber, a textile, paper, a synthetic-resin film, and a porous foaming resin film, and its thing formed at the following multilayer structure are desirable from gestalt holdout, facility, a health side For example, the charge for sheet-like lips of multilayer structure of a moisturization pack which prepared the layer which has an adhesive property further in the front face of the charge of a pack adhering to a lip is mentioned.

[0023] After leaving it for 0.1 - 10 minutes after sticking a sheet on the lip as operation of the charge for sheet-like lips of this invention of a moisturization pack leaves it for 5 minutes preferably desirable especially, it is desirable to exfoliate a sheet from a lip. Moreover, as for the charge for sheet-like lips of this invention of a moisturization pack, it is desirable to have packed the sheet object with the aluminum sheet of sealing nature etc.

[0024]

[Example] Hereafter, an example and the example of a comparison explain this invention to a detail further. In addition, the organoleptic property evaluation approach used by this invention is as follows.

[0025] The continuous use trial for one week estimated the organoleptic property of a prototype in the winter season using 20 special panelists. As evaluation criteria, "Doesn't a motion of opening of everyday conversation extent under sheet pasting drop out, either?" It carried out by five items of "whether a pain is sensed for a lip in case a sheet is removed in 5 minutes after pasting", whether "whether the dry area of a lip and the condition of dullness to have improved after pasting", whether "whether the lip to have become smooth after pasting", and whether "whether the lip stick paste to have become good." the case where there are not +five points and effectiveness about the case of being effective -- zero point -- carrying out -- the meantime -- four steps -- evaluating -- all the members' sum total mark -- with, it considered as the evaluation result. Therefore, it is shown that evaluation is so high that sum total mark are high. In addition, the lip stick of a commercial lasting type was used as a lip stick.

[0026] Moreover, about adhesive ability, it measured using the rheometer (CR150 made from the Sun electron) by the perpendicular tension test method (the 12mm phi cylinder SUS of fixture tips). The room temperature at the time of measurement made measured value maximum load at the time of pulling up them at 300mm speed for /, after contacting 23 degrees C and a fixture for 10 seconds at right angles to the adhesive face of a sheet. It is shown that adhesion is so high that a figure is high.

[0027] The charge for sheet-like lips of a moisturization pack was produced by the formula of the example 1 following, and the manufacture approach. The polyester film of this article was removed, and the gel part was stuck on a part for the pars labialis, it removed after 5 minutes, and organic-functions evaluation was performed.

[0028]

[Table 1]

配合組成	重量部
モノマー配合液	
アクリルアミド	23.0
グリセリン	30.0
メチレンビスアクリルアミド	0.18
精製水	40.0
ユズ抽出液	1.0
防腐剤	適量
重合開始剤	
4%過硫酸カリウム水溶液	3.5
2%ピロ亜硫酸カリウム水溶液	2.5

[0029] After slushing into the sink mold which covered with the polyester film of 38-micrometer thickness after adding the polymerization initiator to monomer combination liquid (what was agitated well) and agitating well and placing the spacer of 0.7mm thickness, the polyester film of 38-micrometer thickness is put on the upper part, and it heats at 70 degrees C, and is left for 60 minutes, and a polymerization is completed. Thus, the made gel sheet was pierced to the oblong of the major axis of 60mm, and 30mm of minor axes, the slit with a width of 45mm was put into the center section of the major-axis direction at coincidence, and the charge for sheet-like lips of this invention of a moisturization pack was obtained. The adhesive ability at this time was 185g.

[0030] The charge for sheet-like lips of a moisturization pack was produced by the formula of the example 2 following, and the manufacture approach. After removing polyester film, the gel part was stuck on a part for the pars labialis the whole nonwoven fabric, and it removed after 5 minutes, and organic-functions evaluation was performed.

[0031]

[Table 2]

配合組成	重量部
モノマー配合液	
アクリルアミド	23.0
グリセリン	30.0
メチレンビスアクリルアミド	0.08
精製水	40.0
ユズ抽出液	1.0
防腐剤	適量
重合開始剤	
4%過硫酸カリウム水溶液	3.5
2%ピロ亜硫酸カリウム水溶液	2.5

[0032] It is metsuke amount 50 g/m<sup>2</sup> to the upper part after slushing into the sink mold which covered with the polyester film of 38-micrometer thickness after adding the polymerization initiator to monomer combination liquid (what was agitated well) and agitating well and placing the spacer of 0.7mm thickness. A polyester nonwoven fabric is put, and it heats at 70 degrees C, and is left for 60 minutes,

and a polymerization is completed. Thus, the made gel sheet was pierced to the oblong of the major axis of 60mm, and 30mm of minor axes, the slit with a width of 45mm was put into the center section of the major-axis direction at coincidence, and the charge for sheet-like lips of this invention of a moisturization pack was obtained. The adhesive ability at this time was 234g.

[0033] The charge for sheet-like lips of a moisturization pack was produced by the formula of the example 3 following, and the manufacture approach. The polyester film of this article was removed, and the gel part was stuck on a part for the pars labialis, it removed after 5 minutes, and organic-functions evaluation was performed.

[0034]

[Table 3]

配合組成	重量部
モノマー配合液	
アクリルアミド	23.0
グリセリン	10.0
メチレンビスアクリルアミド	0.18
マルピトール	5.0
精製水	65.0
ユズ抽出液	1.0
防腐剤	適量
重合開始剤	
4%過硫酸カリウム水溶液	3.5
2%ピロ亜硫酸カリウム水溶液	2.5

[0035] The charge for sheet-like lips of this invention of a moisturization pack was altogether obtained similarly with the example 1 except having used this monomer combination liquid. The adhesive ability at this time was 92g.

[0036] The charge for sheet-like lips of a moisturization pack was produced by the formula of the example 4 following, and the manufacture approach. After removing the gel part of this article from a lower pan the whole polyurethane film, the gel part was stuck on a part for the pars labialis, it removed after 5 minutes, and organic-functions evaluation was performed.

[0037]

[Table 4]

配合組成	重量部
モノマー配合液	
アクリルアミド	23.0
グリセリン	30.0
メチレンビスアクリルアミド	0.08
精製水	45.0
ユズ抽出液	1.0
防腐剤	適量
重合開始剤	
イルガキュア184 (チバガイギー社製)	0.3



[0038] After adding the polymerization initiator and agitating the monomer combination liquid (what was agitated well) adjusted at 4 degrees C, the sheet made from polypropylene with which 300-micrometer thickness continued was used, and the major axis of 60mm, 30mm of minor axes, and the shaping sheet that carried out thermoforming of the dished crevice of an oblong with a depth of 0.7mm, and prepared them were produced. [ many ] Next, after adding a photopolymerization initiator and stirring the monomer combination liquid (what was stirred well) adjusted to 4 degrees C, it pours into a part for each tray of the above-mentioned shaping sheet, and the polyurethane film of 30-micrometer thickness is put on the upper part, and it is 2 50mW/cm. Strong ultraviolet rays were irradiated for 60 seconds, and the polymerization reaction was carried out. The gel sheet made into each tray was clipped to the somewhat large oblong so that every pan of a upside film and the lower part and a gel part might not be cut, and an edge with a width of 2mm might remain in a perimeter, it put the slit with a width of 45mm into the center section at coincidence, and obtained the charge for sheet-like lips of this invention of a moisturization pack. The adhesive ability at this time was 196g. The gel part of this article was removed from the lower pan the whole polyurethane film, and the gel part was stuck on the pars labialis the back, it removed after 5 minutes, and organic-functions evaluation was performed.

[0039] The charge of a sheet-like pack was obtained like the example 1 except having changed example of comparison 1 acrylamide into acrylic-acid soda. The adhesive ability at this time was 426g. The polyester film of this article was removed, and the gel part was stuck on a part for the pars labialis, it removed after 5 minutes, and organic-functions evaluation was performed.

[0040] The charge for sheet-like lips of a moisturization pack was produced by the formula of the example of comparison 2 following, and the manufacture approach. The polyester film of this article was removed, and the gel part was stuck on a part for the pars labialis, it removed after 5 minutes, and organic-functions evaluation was performed.

[0041]

[Table 5]

配合液	重量部
寒天	3. 0
ゼラチン	3. 0
グリセリン	4 0. 0
精製水	5 3. 0
ユズ抽出液	1. 0
防腐剤	適量

[0042] After agitating the above-mentioned combination liquid so that it may become homogeneity, it was made to heat and dissolve in 90 degrees C, this liquid was slushed into the pan of an example 4, the polyester film of 50-micrometer thickness was put on the top, and cooling solidification was further pressed down and carried out with the plate of aluminum clitteringly that top. After that, it processed like the example 1 and the charge of a sheet-like pack was obtained. The adhesive ability at this time was 6g.

[0043] The evaluation result of an example and the example of a comparison is shown in Table 6.

[0044]

[Table 6]

	シートが脱 落しない	痛みが ない	荒れ等 の改善	なめらかに なった	口紅ののりが 改善された
実施例 1	8 7	8 6	9 3	9 2	9 3
実施例 2	8 8	7 8	8 4	9 4	9 4
実施例 3	8 6	9 0	9 0	8 8	9 2
実施例 4	9 2	8 2	9 0	9 0	9 2
比較例 1	9 8	4	0	2	5
比較例 2	1 2	1 0 0	2 6	3 2	4 6

[0045] The result of Table 6 shows that the example of this invention has all obtained high evaluation to each evaluation criteria. On the other hand, although the example 1 of a comparison raises adhesion, it turns out that adhesion is too high and is accompanied by the pain. Therefore, there were also many examples which must use water at the time of exfoliation and must exfoliate at it. Moreover, although the example 2 of a comparison was the low sample of adhesion which used an agar and gelatin, although there is no pain, since it had not ridden on the lip, evaluation worsened [ usability ] bad.

[0046]

[Effect of the Invention] It turns out that it excels also in the effectiveness of pastes, such as an improvement of the dry area of the lip after the charge for sheet-like lips of this invention of a moisturization pack is excellent in the balance of adhesive ability and sticks on a lip from the above result, dullness, and smoothness, and a lip stick.

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[Translation done.]